

In the Claims

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Claim 31 (new): A method for storing information on a unitary storage medium, comprising the steps of:

storing on at least one Table-of-Contents (TOC) access mechanism, wherein the TOC access mechanism contains configuration information for various items on the unitary storage medium and is capable of accessing various audio items on the unitary storage medium;

storing a file-based access mechanism including a root directory on that is operatively coupled to the TOC access mechanism and also operatively coupled to at least one sub-directory, the at least one sub-directory being capable accessing various audio items on the unitary storage medium;

wherein various audio items on the unitary storage medium using can be accessed using either the TOC access mechanism or the file-based access mechanism.

Claim 32 (new): The method for storing information of Claim 31 wherein the step of storing the at least one TOC mechanism further comprises storing multiple copies of a master TOC with each of the master TOC copies containing pointers to areas containing audio items.

Claim 33 (new): The method for storing information of Claim 32 wherein the step of storing the file based access mechanism further comprises the sub-directory pointing to each of the audio items as files, the file system being compatible with standard personal computer files system to allow personal computers to use the file system to read audio items in order to play audio item contents.

Claim 34 (new): The method for storing information of Claim 33 wherein the step of storing the at least one TOC mechanism further comprises storing multiple copies of the sub-TOC, each of the sub-TOC copies containing pointers to contents of the audio items to allow a stand alone audio player to play the audio items without using a file system.

Claim 35 (new): The method for storing information of Claim 34 wherein contents of the audio

items pointed to by the sub-TOC being one of: audio data having just two channels or audio data having more than two channels.

Claim 36 (new): The method for storing information of Claim 35 wherein the multiple copies of the master TOC are stored in respective consecutive predetermined portions of a track, each of the master TOC portions each containing a predetermined number of consecutive sectors of the track.

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Claim 37 (new): The method for storing information of Claim 36 wherein the root directory points to the sub-directory and to each of the copies of the master TOC as files, the sub-directory pointing to each of the copies of the sub-TOC as files and pointing to the audio items as files.

Claim 38 (new): The method for storing information of Claim 37, further comprising storing the sub-TOC portions such that each contains an integral number of consecutive sectors, a first of the consecutive portions of the sub-TOC starting at a predetermined track sector.

Claim 39 (new): The method of storing information of claim 38, wherein the root directory provides an operative connection to images.

Claim 40 (new): The method of Claim 31 wherein the TOC mechanism is a single level TOC mechanism that points to various audio items on the unitary storage medium, and points immediately to respective contents of the various audio items on the unitary storage medium.

Claim 41 (new): A unitary storage medium, comprising:

- at least one Table-of-Contents (TOC) access mechanism containing configuration information for various audio items on the unitary storage medium and capable of accessing various audio items on the unitary storage medium;

- a file-based access mechanism including a root directory on that is operatively coupled to the TOC access mechanism and also operatively coupled to at least one sub-directory, the at least one sub-directory being capable accessing various audio items on the unitary storage medium;

- wherein various audio items on the unitary storage medium using can be accessed using either the TOC access mechanism or the file-based access mechanism.

Claim 42 (new): The unitary storage medium of Claim 41, wherein the at least one TOC mechanism further comprises a plurality of master TOC copies with each of the master TOC copies containing pointers to areas containing audio items.

Claim 43 (new): The unitary storage medium of Claim 42, wherein the file based access mechanism further comprises the sub-directory pointing to each of the audio items as files, the file system being compatible with a standard personal computer file system to allow a personal computer to use the file system to read the audio item files in order to play contents of the audio items.

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Claim 44 (new): The unitary storage medium of Claim 43, wherein the at least one TOC mechanism further comprises multiple copies of the sub-TOC, each of the sub-TOC copies containing pointers to contents of the audio items to allow a stand alone audio player to play the audio items without using a file system.

Claim 45 (new): The unitary storage medium of Claim 44, wherein contents of the audio items pointed to by the sub-TOC being one of: audio data having just two channels or audio data having more than two channels.

Claim 46 (new): The unitary storage medium of Claim 45 wherein the multiple copies of the master TOC are stored in respective consecutive predetermined portions of a track, each of the master TOC portions each containing a predetermined number of consecutive sectors of the track.

Claim 47 (new): The unitary storage medium of Claim 46 wherein the root directory points to the sub-directory and to each of the copies of the master TOC as files, the sub-directory pointing to each of the copies of the sub-TOC as files and pointing to the audio items as files.

Claim 48 (new): The unitary storage medium of Claim 47, wherein the sub-TOC portions such that each contains an integral number of consecutive sectors, a first of the consecutive portions of the sub-TOC starting at a predetermined track sector.

Claim 49 (new): The unitary storage medium of Claim 41, wherein the root directory provides an operative connection to images.

Claim 50 (new): The unitary storage medium of Claim 41 wherein the TOC mechanism is a single level TOC mechanism that points to various audio items on the unitary storage medium, and points immediately to respective contents of the various audio items on the unitary storage medium.

Claim 51 (new): A method, comprising the steps of:

providing a unitary storage medium;

storing audio-centered information on the unitary storage medium;

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storing on the unitary storage medium, a Table-of-Contents (TOC) access mechanism specifying an actual configuration of various audio items of the audio-centered information on the unitary storage medium, and pointing to the audio items, and to multiple content items of the audio items; and

storing on the unitary storage medium, a file-based access mechanism including a root directory and pointers to files containing the audio-centered information, the root directory pointing to a file for the TOC mechanism, wherein the audio-centered information is accessible using either the TOC access mechanism or the file-based access mechanism.

Claim 52 (new): The method of claim 51, wherein the root directory points to lower level directories that each pertain to a different standardized audio format, thereby providing an additional access mechanism the audio-center information.

Claim 53 (new): The method of Claim 52, wherein the root directory point to one or more lower level directories that each contain their own sub-TOC file, each lower level directory using a different standardized audio format

Claim 54 (new): The method of Claim 53, wherein the number of lower level file directories is exactly equal to 2.

Claim 55 (new): The method of Claim 53, wherein the different standardized audio formats include at least a stereo format and at least a multi-channel audio format.

Claim 56 (new): A unitary storage medium, comprising:

audio-centered information;

a Table-of-Contents (TOC) access mechanism specifying an actual configuration of various audio items of the audio-centered information on the medium, and pointing to the audio items, and to the respective contents of the audio items; and

a file-based access mechanism including a root directory and pointer to files containing the audio-centered information, the root directory pointing to a file for the TOC mechanism, wherein the audio-centered information is accessible using either the TOC access mechanism or the file-based access mechanism.

Claim 57 (new): The unitary storage medium of Claim 56, wherein:

the root directory points to a higher level TOC file and to one or more lower level file directories that each point to their own lower level TOC file;

a different respective standardized audio format used by each directory; and

the respective audio formats include at least a stereo format and at least a multi-channel audio format.

Claim 58 (new): A reader for an optical disc, comprising:

optical reading means for producing a read signal from the optical disc;

disc driving means for moving the optical read means with respect to a track on the optical disc; and

access means for controlling the disc drive means for accessing audio-centered information stored on the optical disc using access mechanisms of the disc, the access mechanisms including:

a Table-of-Contents (TOC) access mechanism specifying an actual configuration of various audio items on the medium and pointing to audio items and to respective multiple content items of respective audio items; and

a file-based access mechanism including a root directory containing a pointer to a file for the TOC mechanism and pointers to audio items;

wherein the audio information is accessible using either the TOC access mechanism or the file-based access mechanism.

Claim 59 (new): The reader of Claim 58 wherein the TOC access mechanism further comprises a highest level TOC file pointing to audio items and a lowest level TOC file pointing immediately to respective contents of the audio items.

Claim 60 (new): The reader of Claim 59 wherein one audio items includes multiple content items.

Claim 61 (new): The reader of Claim 58 wherein at least a portion of the TOC access mechanism is located at a predetermined location to thus providing access independent of the file-based access mechanism.

Claim 62. (new): A unitary storage medium, comprising:

a track for storing information in the form of optically readable marks, the track being logically divided into sectors;

a table of contents (TOC) system including a master TOC and a sub-TOC, multiple copies of the master TOC being stored in respective consecutive predetermined portions of the track, the master TOC portions each containing the same predetermined number of consecutive sectors of the track, the master TOC containing pointers to areas of the track containing respective audio items; multiple copies of the sub-TOC being stored in a respective consecutive portions of the track, the sub-TOC portions each containing an integral number of consecutive sectors, a first of the consecutive portions of the sub-TOC starting at a predetermined sector of the track, the sub-TOC containing pointers to the contents of the audio items to allow a stand alone audio player to play the contents of the audio items without using a file system, the audio contents pointed to by the sub-TOC being one of: audio data having just two channels or audio data having more than two channels; and

a file system including a root directory and at least one sub-directory, the root directory pointing to the sub-directory and pointing to each of the copies of the master TOC as files, the sub-directory pointing to each of the copies of the sub-TOC as files and pointing to the audio items as files, the file system being compatible with a standard personal computer file system to

allow a personal computers to use the file system to read the audio item files in order to play the contents of the audio items;

wherein the audio information is accessible using either the TOC system or the file system.

Claim 63 (new): A method for storing information on a unitary storage medium, comprising the steps of:

providing a root directory on that is operatively coupled at least one Table-of-Contents (TOC) access mechanism, wherein the TOC access mechanism contains configuration information for various items on the unitary storage medium and is capable of accessing various items on the unitary storage medium, and wherein the root directory is operatively coupled to access various items on the unitary storage medium as a file based access mechanism;

wherein various items on the unitary storage medium using can be accessed using either the TOC access mechanism or the file based access mechanism.

Claim 64 (new): The method for storing information of Claim 63 wherein the step of providing further comprises the TOC access mechanism including a master TOC and a sub-TOC.

Claim 65 (new): The method for storing information of Claim 63 wherein the step of providing further comprises the TOC access mechanism including a master TOC with a plurality copies of the master TOC being stored on the unitary storage medium.

Claim 66 (new): The method for storing information of Claim 65 wherein the step of providing further comprises the plurality of copies of the master TOC being stored on the unitary storage medium in respective consecutive predetermined portions of the unitary storage medium.

Claim 67 (new): The method for storing information of Claim 66 wherein the step of providing further comprises the master TOC portions each containing an equal predetermined number of consecutive sectors of a track.

Claim 68 (new): The method for storing information of Claim 67 wherein the step of providing further comprises the master TOC containing pointers to areas of the track containing respective

audio items.

Claim 69 (new): The method for storing information of Claim 68 wherein the step of providing further comprises multiple copies of a sub-TOC being stored in a respective consecutive portions of the unitary storage medium, each of the sub-TOC containing pointers to the contents of audio items allowing audio players to play audio items without using a file system.

Claim 70 (new): The method for storing information of Claim 69 wherein the step of providing further comprises the sub-TOC copies each containing an integral number of consecutive sectors of the track.

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Claim 71 (new): The method for storing information of Claim 70 wherein the step of providing further comprises the sub-TOC copies each having a first of the consecutive sectors of the sub-TOC starting at a predetermined portion of the track.

Claim 72 (new): The method for storing information of Claim 70 wherein the step of providing further comprises the audio contents pointed to by the sub-TOC being one of: audio data having just two channels or audio data having more than two channels;

Claim 73 (new): The method for storing information of Claim 69 wherein the step of providing further comprises the root directory including at least one sub-directory, the root directory pointing to the sub-directory and pointing to each of the copies of the master TOC as files, the sub-directory pointing to each of the copies of the sub-TOC as files and pointing to the audio items as files.

Claim 74 (new): The method for storing information of Claim 73 wherein the step of providing further comprises providing the file based access mechanism such that it is compatible with standard personal computer file systems allowing personal computers to use the file system and read audio item files in order to play audio item contents.

Claim 75 (new): The method for storing information of Claim 63 wherein the step of providing

further comprises the file based access mechanism including at least one sub-directory to the root directory that is capable of operating with file structures used in personal computers.

Claim 76 (new): The method for storing information of Claim 63 wherein the step of providing further comprises the root directory including an operative connection to images.

Claim 77 (new): The method for storing information of Claim 63 wherein the step of providing further comprises providing the TOC mechanism as a single level TOC mechanism that points to various items on the unitary storage medium, and points immediately to respective contents of the various items on the unitary storage medium.

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Claim 78 (new): The method for storing information of Claim 63 wherein the step of providing further comprises providing the TOC mechanism wherein at least a portion of the TOC access mechanism is located at a predetermined location thus providing access to various items on the unitary storage medium independent of the file-based access mechanism.

Claim 79 (new) A unitary storage medium, comprising:

a root directory on that is operatively coupled at least one Table-of-Contents (TOC) access mechanism, wherein the TOC access mechanism contains configuration information for various items on the unitary storage medium and is capable of accessing various items on the unitary storage medium, and wherein the root directory is operatively coupled to access various items on the unitary storage medium as a file based access mechanism;

wherein various items on the unitary storage medium using can be accessed using either the TOC access mechanism or the file based access mechanism.

Claim 80 (new): The unitary storage medium of Claim 79 wherein the TOC access mechanism further comprises a master TOC and a sub-TOC.

Claim 81 (new): The unitary storage medium of Claim 79 wherein the TOC access mechanism further comprises a master TOC with a plurality copies of the master TOC being stored on the unitary storage medium.

Claim 82 (new): The unitary storage medium of Claim 81 wherein the TOC access mechanism

further comprises the plurality of copies of the master TOC being stored on the unitary storage medium in consecutive predetermined portions of the unitary storage medium.

Claim 83 (new): The unitary storage medium of Claim 82 wherein the TOC access mechanism further comprises the master TOC portions each containing an equal predetermined number of consecutive sectors of a track.

Claim 84 (new): The unitary storage medium of Claim 83 wherein the TOC access mechanism further comprises the master TOC containing pointers to areas of the track containing respective audio items.

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Claim 85 (new): The unitary storage medium of Claim 84 wherein the TOC access mechanism further comprises multiple copies of a sub-TOC, each copy of the sub-TOC containing pointers to the contents of audio items.

Claim 86 (new): The unitary storage medium of Claim 85 wherein each copy of the sub- TOC is stored in a respective consecutive portions of the unitary storage medium, allowing audio players to play audio items without using a file system.

Claim 87 (new): The unitary storage medium of Claim 86 wherein each copy of the sub- TOC contains an integral number of consecutive sectors of the track.

Claim 88 (new): The unitary storage medium of Claim 87 wherein each copy of the sub- TOC contains has a first of the consecutive sectors of the sub-TOC starting at a predetermined portion of the track.

Claim 89 (new): The unitary storage medium of Claim 85 wherein the multiple copies of the sub-TOC point to contents of audio items selected from one of: audio data having just two channels or audio data having more than two channels;

Claim 90 (new): The unitary storage medium of Claim 79 wherein the filed based access mechanism further comprises:

at least one sub-directory to the root directory, with the root directory pointing to the sub-directory and each of the copies of the master TOC as files; and

at least one sub-TOC, the sub-directory pointing to the sub-TOC as a file and further pointing to audio items on the unitary storage medium as files.

Claim 91 (new): The unitary storage medium of Claim 90 wherein the file based access mechanism is compatible with standard personal computer file systems allowing personal computers to use the file system and read audio item files in order to play audio item contents.

Claim 92 (new): The unitary storage medium of Claim 79 wherein the root directory further comprises at least one sub-directory that functions as the file based access mechanism capable of operating with file structures used in personal computers.

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✓ Claim 93 (new): The unitary storage medium of Claim 79 wherein the root directory further comprises an operative connection to images.

Claim 94 (new): The unitary storage medium of Claim 79 wherein the TOC mechanism further comprises a single level TOC mechanism that points to various items on the unitary storage medium, and points immediately to respective contents of the various items on the unitary storage medium.

Claim 95 (new): The unitary storage medium of Claim 79 wherein the TOC mechanism further comprises at least a portion of the TOC access mechanism is located at a predetermined location thus providing access to various items on the unitary storage medium independent of the file-based access mechanism.
